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"RECENT STUDIES IN THE PREVENTION OF CERTAIN INFECTIOUS DISEASES"*

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I WISH to express my deep appreciation for the honor of being asked to deliver the fifth Chapin Memorial Lecture before your Society. The war has emphasized with extraordinary clarity the importance in the field of medical research of a trait for which Dr. Chapin was particularly distinguished—good team work. After composing the larger portion of the present memorial lecture I remembered that Dr. Francis G. Blake had delivered the fourth memorial lecture last year and looked up his subject. He mentioned very graciously some of the work conducted by the Commission on Measles and Mumps under the Army Epidemiological Board over which he presided as President. No one had a better opportunity than Dr. Blake of viewing and evaluating the work on infectious diseases conducted by the armed services and in civilian institutions during this war nor has anyone given greater service in the development of a far-sighted program for their control in wartime. The team work for which Dr. Chapin was distinguished has been again memorialized in the data recorded here in his honor by Dr. Blake.

It is perhaps fitting therefore that the subjects I have chosen should be in the nature of a further supplement to much of the material he presented to the Society at that time. Some of the material will receive a more historical emphasis while the remaining portion will include one or two new subjects and the addition of data which were not available to him then. I trust you will excuse a brief review of some of his data for the purpose of preserving the continuity of their presentation.

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Like old McDougall, who in the nursery song owned a farm with a chick-chick here and a chick-chick there, here a chick, there a chick, everywhere a chick, the clinical investigator usually stakes out for himself far larger premises than he can possibly cover and in cultivating his chosen fields takes a poke-poke here and a poke-poke there, here a poke, there a poke, everywhere a poke with variable profit to all concerned. In investigations the clinician must necessarily take a poke here and a poke there as the opportunity arises, inasmuch as it is more difficult for him to limit himself to one field as is the proper course of the man who cultivates the more fundamental fields of medical science. In the clinician's position of exposure to interesting fields of medicine that impinge upon his curiosity with every new case he sees, the great danger is that he will dissipate his energies in the farmer McDougall sense of taking everywhere a poke. After all, the essential point for the clinician is to take a poke, at least, somewhere and in doing so, to learn how to confine his energies within the limits of his capabilities. Even investigators with the greatest ability and imagination fail of achievement when the imagination is undisciplined and lacks restricted objectives.

This evening I wish to review a group of studies from our laboratories of the University of Pennsylvania and the Children's Hospital of Philadelphia which have a certain continuity of outline and purpose. These studies are concerned with certain virus diseases and particularly with the application of practical methods for their control. Two of these diseases have been the most widespread and severe scourges of World War I and World War II. They are respectively pandemic influenza and pandemic hepatitis.

Two additional virus diseases which I want to discuss, measles and mumps also have played a large part in both wars, as well as occupying an important place in pediatric practice. For the pur-

continued on next page

pose of holding to restricted objectives I shall outline only our own studies, mentioning but briefly those investigations from other laboratories which have a close practical bearing on the problems involved.

Epidemic and Pandemic Influenza

Two types of epidemic influenza thus far have been identified by means of determining their etiologic agents. These have been termed influenza A and B. Since the identification of the virus agent in 1933, epidemics of influenza A have appeared at approximately 2 to 3 yearly intervals while epidemics of influenza B have appeared at approximately 4 to 6 yearly intervals following its identification a few years later. Smith, Andrewes, and Laidlaw[1] were responsible for the identification of the influenza A virus, while Francis[2] and Magill[3] independently identified the influenza B virus. None of these epidemics has been particularly severe with the possible exception of the 1936-1937 influenza A epidemic, while in contrast pandemic influenza, such as that occurring in 1918, has been exceptionally severe and widespread. That pandemic influenza is related to influenza A has been frequently suggested, owing principally to the antigenic relation established by Shope[4] between the virus of swine influenza and influenza A virus and also to the fact that swine influenza apparently was noted for the first time during the 1918 pandemic of human influenza. It is conceivable however, that the great influenza pandemics which have swept through the world at intervals of two to three decades, have been due to more than a single etiologic agent, possibly to a compound virus and bacterial infection. With the recent discovery by the Doctors Henle,[5] working at the Children's Hospital of Philadelphia, that an endotoxin is present in the influenza virus particles themselves which varies considerably with different strains of both viruses A and B, it is also conceivable that the pandemic influenza is caused by a genetic alteration in the influenza virus A or B or in both resulting in a marked periodic increase in virulence.

If influenza A is related to pandemic influenza, which it probably is, then we appear to have developed over a period of years a means of vaccination which will at least partially control such pandemics.

Our studies beginning in 1935 early suggested that vaccination with active or inactivated preparations of influenza A virus was successful in protecting a large proportion of those vaccinated. One of the first such experiments conducted at the height of the influenza A epidemic of 1936-1937[6] was quite similar to those conducted more recently by the Army Epidemiological Board and afforded a similar type of protection in the vaccinated group against the epidemic disease. In this particular study at a large institution in New Jersey it was of interest that Shope[7] investigated the serum of swine in herds at "neighboring" institutions affected by the same epidemic wave and found that animals which had been present at the institutions during the epidemic of human influenza A showed marked increases in antibodies against the human influenza A virus and not against the swine influenza virus, although they had suffered no obvious illness. This finding and "our" isolation of the influenza A virus from human naso-pharyngeal washings of the unvaccinated group at the institution at different intervals during the epidemic afforded adequate evidence of the nature of this institutional outbreak, as caused by influenza A virus.

The findings at the University of Pennsylvania by Scott[8] that influenza virus could be obtained in very large amounts in the allantoic fluid of the developing chick embryo opened new possibilities for purification and concentration of virus for use as a vaccine or for the use of the formalized infected allantoic fluid as a vaccine without concentration.

Additional and conclusive evidence of the value of vaccination with influenza A virus against the disease was obtained by the group at the Children's Hospital of Philadelphia.[9] Volunteers, 44 in all, were vaccinated with formalized influenza A virus and they, together with a group of 28 unvaccinated control volunteers, were permitted to inhale active influenza A virus as a challenge to their immunity. The antibody content of the serum in these individuals was determined before and after vaccination and also following the challenge with active influenza A virus. The only vaccinated volunteer who developed influenza A as a result of the challenge was shown to have had no antibody response to the vaccine. Approximately one-third, or 10 of the 28 unvaccinated volunteers developed influenza A as a result of the challenge, a highly significant difference, particularly in view of the fact that in this group also influenza was limited to those individuals of low antibody titer. This study established in general a level of antibodies above which protection apparently was assured. A later experiment, of a similar type, by Francis,[10] confirmed the significance of these findings. He also expanded his studies to include groups of volunteers vaccinated with influenza B vaccine and later challenged with inhalation of active influenza B virus.[11] Significant protection was obtained also in this group.

During the recent war, in November and December of 1943, during a widespread epidemic of influenza A, and during the epidemic of influenza B

of the past winter, members of the Army Epidemiological Board's Commission on Influenza directed by Dr. Francis, have obtained conclusive data on the value of a combined vaccine of viruses A and B.[12] This vaccine is also obtained by concentrating the viruses from the allantoic fluid of the chick embryo by absorption on and elution of the viruses from chick red cells. Only a small part of this vaccine is influenza antigen owing to the admixture of extraneous chick material resulting from the method of production mentioned. Chambers and Henle at the University of Pennsylvania had previously used protamine for precipitation and concentration of the viruses,[13] while Stanley at the Rockefeller Institute, Princeton, more recently has used high-speed centrifugation by means of a Sharples centrifuge for such concentration,[14] both of which methods, for various reasons, appear preferable to the method used for the U. S. Army. Salk has also used Calcium Phosphate in precipitating the influenza viruses from allantoic fluid for the development of a similar vaccine.[15] This is also preferable to the vaccine used for the U. S. Army.

In adapting Freund's[16] use of a lanolin and mineral oil preparation for the slower absorption of parenterally injected antigens to the influenza virus, Friedewald of the Rockefeller Institute, New York, demonstrated in animals that vaccine of influenza viruses A and B in such an oily vehicle would produce excellent antibody responses over a longer period of time.[17] At The Children's Hospital of Philadelphia, studies chiefly by the Drs. Henle have confirmed these findings and extended them to man.[18] The use of such oily preparations of vaccine has resulted not only in a markedly increased height of antibody production but also in a greatly prolonged response which in the experiments now extended to over 18 months, has continued at a level of antibodies well above what may be considered the "protective level". A few local reactions at the site of injection have occurred, and two small abscesses have formed in a total of 80 individuals vaccinated. With modification to eliminate such reactions, if such modification is possible, this vaccine would appear to be one of the most promising steps in the efforts to protect large groups of the population against epidemic or even, perhaps, pandemic influenza.

It is also possible that unconcentrated or unmodified infected allantoic fluid containing viruses A and B, injected in a single dose of about 3 ml. at yearly intervals, on further study would prove to be the most practical and economical method of vaccination, despite the shorter period over which a "protective" level of antibodies is maintained. Epidemics are more apt to occur during the relatively short period of late fall to early spring.

I have reviewed a few of the steps in the development of influenza vaccine at this length, and this is actually but a brief and very incomplete review of the subject of influenza vaccine, to emphasize the inevitably slow steps the development in such a field requires, together with the close collaborative effort of the clinician and the virologist.

However great our progress may have been up to this moment, years of further study will be required for the establishment of the best methods and materials to protect against epidemic or pandemic influenza.

Inasmuch as some of the studies concerning the remaining subjects of hepatitis, measles, and mumps, and poliomyelitis are related to a fraction of pooled plasma, gamma globulin, it is essential that certain general concepts concerning the role of gamma globulin in infectious diseases should be considered.

It must be emphasized that the process of fractionation of gamma globulin not only separates but also concentrates the antibodies.[19] The concentration of antibodies in the gamma globulin thus prepared is approximately 25 times that of normal pooled plasma.[20]

The pooling of plasma from hundreds or thousands of adult blood donors, while only of quantitative value in the separation of such plasma components as albumin, may be, and usually is, of great qualitative value in respect to gamma globulin. The presence of antibodies against infectious diseases in human plasma appears to depend upon exposure to antigenic stimuli resulting both from subclinical or inapparent, and from clinical infections.

The large size of the plasma pools developed by the American Red Cross tends to assure a surprisingly uniform titer of antibodies against the infectious agents endemic to the geographic area in which the blood donors reside. In studies of gamma globulin obtained from donors in the eastern region of the United States, Dr. Werner Henle of the Children's Hospital, Philadelphia, found no detectable antibodies against Western equine encephalomyelitis virus, whereas antibodies against the Eastern equine encephalomyelitis virus were found in considerable amounts.[21] We are not aware of any evidence of the opposite picture in the gamma globulin obtained from Western donors, but it is probable that such a contrast will be found. Following the influenza A epidemic of November and December 1943 the gamma globulins from all areas of the United States gave evidence of a marked general increase in the antibodies against influenza A virus. As previously mentioned a direct relationship between the height of such antibodies and individual resistance to influenza A has been demonstrated by a number of workers, in-

continued on next page

cluding out laboratories in Philadelphia.[9] Thus the general level of donors' antibodies in any population may provide an indication of its susceptibility to the epidemic disease as well as evidence of a recent epidemic wave of influenza. The uniformity of antibody levels in pooled plasma and thus in gamma globulin depends chiefly therefore upon the following factors:

1. The presence of endemic or of recent epidemic disease in the geographical area from which the blood is drawn.
2. The *amount* and the *duration* of antibodies resulting from specific infections.
3. The number of donors contributing to the pool.

Certain of these factors can be controlled in the collection of pooled plasma.

For a discussion of gamma globulin from pooled plasma it appears important to review some theoretical considerations relating to certain of the epidemic diseases of childhood caused by viruses, and also certain data recently accumulated concerning the possible uses of gamma globulin in such diseases.

The diseases chosen for this particular comparison are:—

1) Measles
2) Mumps
3) Infectious (epidemic) hepatitis
4) Poliomyelitis

Although not demonstrated conclusively in any of these 4 diseases it appears possible from the facts now available that either apparent or inapparent infection in childhood or early adult life with the 4 viruses effects a slowly developing permanent immunity to them in the greater part of the general population. Because of its ease of transmission, measles immunizes the general population earlier than the other 3 diseases. Infectious (epidemic) hepatitis appears to be the least readily transmissible (although it may be present at times in drinking water) of the four diseases and therefore may not immunize most of the population until the age range of approximately 30 to 35 years. Mumps and poliomyelitis would appear to occupy a position between measles and infectious hepatitis, depending upon the ease with which they are transmitted in varying aggregations of individuals. Thus, under usual conditions in the United States larger numbers of frank clinical cases of mumps and poliomyelitis occur among young adults than is the case with measles. The rapidity with which a population is immunized also obviously depends upon whether it is urban or rural. The unusual aggregations consequent to war-time conditions accelerate the immunization of persons from rural groups. The incidence of frank clinical cases of measles, mumps, infectious hepatitis, and poliomyelitis in the entire population diminshes in the order named. This order of incidence is not theoretical; the facts are well known. In contrast to the incidence of frank clinical cases, it appears possible (a theoretical possibility supported by considerable data) that the incidence of subclinical or inapparent infections increases, rather than diminishes, in the same order, measles having very few and poliomyelitis a great number of subclinical or inapparent cases. If most of the general population throughout its early years is permanently immunized against these infections by an interaction between host and parasite, regardless of whether the interaction is apparent or inapparent, then it is highly probable that the gamma globulin obtained from the general population in an age range above 30 years would contain antibodies in concentrated amounts against all of these diseases. These theoretical considerations have been strengthened by considerable experimental evidence.

Whether or not such concentrated antibodies are present and will passively protect against measles, mumps and infectious hepatitis has been studied in humans. Although no tests have been made in man due to war conditions, considerable evidence from studies of mice, cotton rats and monkeys indicates the presence in gamma globulin from human plasma pools of large amounts of antibodies against certain strains of poliomyelitis virus.

In passing from theory to practice the results of experimental study of these 4 diseases now may be considered.

Measles

In measles the data have been reviewed previously by a number of workers. Studies at the Children's Hospitals in Boston[22] and Philadelphia[23] have indicated that gamma globulin represents the most satisfactory biological as yet developed for passive protection of exposed susceptibles or for attenuation of the disease. The uniformity of antibodies demonstrated against other antigens than measles virus offers considerable assurance that the globulin in general has a constant titer of measles antibodies. The variables encountered in the clinical studies have been very few and in all probability have been associated with differing exposures and with a variation in host resistance.

Conclusive evidence concerning the value of gamma globulin in the treatment of early cases of measles must still await further studies although the data thus far obtained have suggested that the disease may be modified when large doses of globulin are administered in the prodromal stage of the disease, AT OR PREVIOUS to the appearance of Koplik spots.

Mumps

That the presence of considerable amounts of specific antibodies in pooled convalescent plasma or

in gamma globulin may not be sufficient to protect against certain virus diseases has been well demonstrated in the case of mumps in the experimental monkey by Dr. John Enders.[24] Following intraparotid injection of a mixture of equal parts of active mumps virus suspension and convalescent human serum only partial protection against parotitis in monkeys could be demonstrated. When gamma globulin derived from plasma obtained by Lt. Colonel Aims C. McGuinness from mumps convalescent cases was used in similar neutralization tests, somewhat more effective protection in monkeys against the disease was noted. Evidence of the comparative values of ordinary gamma globulin and of gamma globulin derived from the fractionation of convalescent plasma was obtained by Captain Sydney S. Gellis and Lt. Col. Aims C. McGuinness under the Commission on Measles and Mumps, Army Epidemiological Board.[25] Their data indicate that when 20 ml. of gamma globulin from convalescent pools were injected parenterally in the first twenty-four hours after the onset of epidemic parotitis a diminution in the incidence of orchitis to less than 7% occurred, while no effect was obtained from the parenteral injection of 50 ml. of ordinary gamma globulin. In all large outbreaks of mumps in the U. S. Army as well as in the units studied, the incidence of orchitis has approximated 27 to 33 per cent, thus indicating that the protection afforded by the gamma globulin from convalescent plasma was apparently not a chance occurrence, but was a result of the injected material. This difference obtained in the two groups is statistically significant. The obvious conclusion is that the protective antibodies must be administered in considerable amounts to be effective.

It remains to be determined whether or not the titer of complement fixing antibody which was considerably greater in the gamma globulin from convalescent plasma (Enders) is an index of the protective value of the material.

Although insufficient evidence is available, apparently gamma globulin from plasma pools derived from the general population is not usually effective in protecting exposed susceptibles against mumps in amounts up to 50 ml. Considerable amounts of complement fixing antibodies in the pooled plasma of the general adult population from whom the blood is drawn and thus in the gamma globulin emphasize the finding of Drs. Enders and Kane in Boston, together with Drs. Maris and Stokes in Philadelphia, that when an epidemic of mumps sweeps through a group of susceptibles in a children's institution, in addition to those who contract frank clinical cases, there is also a considerable group of susceptibles who suffer inapparent or subclinical infections. The latter group develops complement fixing antibodies and positive skin tests to heated mumps virus for the first time as a result of such inapparent infections and apparently is immunized following such exposure. It is reasonable to suppose that in this manner most of the susceptibles gradually disappear throughout early life as a result of repeated exposures, whether or not they suffer from frank clinical mumps, and in a reciprocal manner, antibodies appear in the general population.

The value of gamma globulin in mumps thus appears to depend upon facilities for the pooling and fractionation of large amounts of convalescent plasma. In time of peace only moderate amounts of convalescent plasma would be available. If this could be obtained, which seems problematical, it should probably be reserved for treatment of adult males in the first 24 hours of their disease with the aim of preventing or attenuating acute orchitis. The equivalent amount of pooled convalescent plasma injected intravenously should be equally effective but is not as readily preserved as the gamma globulin due to required storage facilities and deterioration. Also the risk of producing serum hepatitis apparently is absent in the case of gamma globulin.

Infectious (Epidemic) Hepatitis

In measles and mumps, one is dealing with virus agents which can at least be studied in monkeys, if not in other animals. Such is not the case in infectious (epidemic) hepatitis, since no susceptible animal has been found. Also in measles and mumps there appear to be few differences in the antigenic properties of their respective viruses inasmuch as one attack usually confers a permanent immunity against all other epidemic strains of virus. Due to the low incidence of frank cases of

continued on next page

Joseph Stokes, Jr. M.D., of Philadelphia, (left) receives the Dr. Charles V. Chapin Medal Award from Mayor Dennis J. Roberts of Providence at the 135th Annual meeting of the Rhode Island Medical Society.

infectious (epidemic) hepatitis during times of peace, adequate data concerning the antigenic relation of epidemic strains are lacking. Also the virus agent or agents responsible for homologous serum hepatitis may or may not have an antigenic relationship to infectious (epidemic) hepatitis.[26]

In infectious (epidemic) hepatitis the incidence rapidly decreases after the age of 30 years, whereas the inconclusive evidence thus far available does not indicate a similar tendency in serum hepatitis. As previously mentioned, a general immunization of the population during the early years apparently occurs in infectious (epidemic) hepatitis, whereas this may not occur in serum hepatitis. If this occurred in serum hepatitis it would be more difficult to explain the hepatitis resulting from the use of the plasma pools in battle casualties.

The presence of antibodies cannot readily be determined by serological means, as in mumps, and thus one can only infer from epidemiologic evidence and from the protective effect of the gamma globulin[27] (see below) that a major portion of the general population is immunized during the early years of life from apparent or inapparent infection with the virus of infectious (epidemic) hepatitis. The experience during the recent war period with different epidemics of infectious (epidemic) hepatitis suggests that clinical cases without jaundice may be nearly as frequent as those with jaundice (Ref. to Akiba epidemic).

Protection "was" afforded against infectious (epidemic) hepatitis by a dose of 10 ml. of gamma globulin in certain units of the 5th Army during the fall and winter of 1944 to 1945. Further epidemic studies made by Capt. Neefe,[27] Capt. Gellis[28] and myself, two in the Mediterranean Theatre of Operations and one in the United States, have demonstrated even more strikingly the value of gamma globulin for passive immunization in this disease. Major Havens and Dr. Paul of New Haven[29] have reported a similarly favorable result. The protection afforded appears to be effective for a period of from six to eight weeks, inasmuch as the long incubation period offers a more adequate opportunity for passive protection than in such a disease as measles.

The protective dosage has been demonstrated to be as small as approximately .06 ml. per pound of body weight, and may prove to be even smaller.

In contrast to the value of gamma globulin in prevention of infectious (epidemic) hepatitis, no value in treatment of the active disease could be demonstrated in limited studies conducted with Captain Gellis in the Mediterranean Theatre[28] during the autumn and winter of 1944 to 1945. These studies were not sufficient to be conclusive and it was possible to treat only a few cases within the first few days of onset. Treatment of infectious (epidemic) hepatitis with gamma globulin deserves further trial.

The value of gamma globulin in the prevention of serum hepatitis remains an interesting problem. Studies were initiated in two large general hospitals in this country among battle casualties who had received blood or plasma or both at the time of injury in various theatres of war. In one hospital[30] in which alternate casualties were injected with gamma globulin—10 ml. in a single dose—the incidence of hepatitis in the injected group did not differ significantly from the incidence of the disease in the controls. However, the average incubation period in the injected group was significantly longer than the average incubation period in the controls. The chance of this average delay in the incubation period not being due to the injection of the globulin was calculated as approximately one in four hundred. In another general hospital[31] which suffered a considerably higher incidence of serum hepatitis, alternate casualties were injected with 2 doses of 10 ml. each of gamma globulin at an interval of 30 days. The use of 2 doses appeared to be considerably more successful than a single dose in that the raio of cases of hepatitis in the control group to cases in the injected group was as seven to one. The chance distribution of the alternate cases in this hospital was indicated by the fact that the various percentages of casualties from the three different theatres of war—European, Mediterranean, and Pacific—were almost identical in the injected and control groups. The only additional general hospital from which data have been obtained as to the results of a single injection of gamma globulin, 10 ml. in all transfused battle casualties reported that the average incubation period of all cases of serum hepatitis was considerably increased over the average incubation period in those cases which occurred before the use of gamma globulin was started. Such data are difficult to evaluate until there is an opportunity of studying further the effect of multiple or larger doses of the globulin in controlling the disease.

In view of the fact that the incidence of infectious (epidemic) hepatitis falls off rapidly after approximately 30 years of age and that no such change has been demonstrated in serum hepatitis, it is difficult to believe that gamma globulin from large pools of adult plasma would be as effective in serum hepatitis as in epidemic or infectious hepatitis.

Poliomyelitis

When gamma globulin from the American Red Cross pools became available, Dr. Sydney Kramer at Michigan, and Dr. Werner Henle and I in Phila-

delphia were all equally interested in determining the presence of neutralizing antibodies against the Lansing strain of poliomyelitis virus. Neutralization tests were conducted in both laboratories when the material first became available and the presence of large amounts of such antibodies was demonstrated. It also became apparent that a very small amount of gamma globulin, 0.1 ml. injected intraperitoneally, would usually protect a mouse, even when the virus was injected intracerebrally at the same time. Further studies conducted by Kramer in cotton rats and monkeys have confirmed its protective value in these animals similar to that originally demonstrated in mice.

The interest in these findings lies not so much in their practical application, which appears highly problematical in view of the low incidence of the disease in man, but rather in the fact that despite the low incidence of the clinical disease, the relatively large amounts of antibodies present would suggest an immunization of the general population, which could perhaps best be explained by subclinical or inapparent infections. This also confirms earlier antibody studies by Kramer[32] and Aycock.[33] There are obviously other possible explanations which in view of the present findings appear less plausible.

Due to the expensive and time-consuming neutralization test in mice, cotton rats, or monkeys, and the variation in virus strains one can only infer, as in infectious hepatitis, on epidemiologic evidence and from the protective effect of the gamma globulin that immunization of a major portion of the general population occurs during the early years of life from mild clinical or subclinical (inapparent) infections. In poliomyelitis this point remains of major importance for investigation, namely, to determine at what age in different geographical areas antibodies appear in groups of children studied longitudinally and both individually and collectively.

In animals, treatment with gamma globulin has proven totally ineffective and injection of large amounts of gamma globulin during the incubation period even well in advance of the earliest onset of the disease has not appeared to decrease its severity when the virus is injected intracerebrally.

During a recent severe epidemic of poliomyelitis Bahlke[34] and Perkins of the New York State Department of Health demonstrated that large doses of gamma globulin injected parenterally as treatment in alternate preparalytic cases had no effect on the course or outcome of the disease.

The use of large amounts of gamma globulin for the study of passive protection of animals infected by more natural routes deserves continued investigation.

Rubella

Due particularly to the serious consequences to the fetus often attendant upon rubella in the mother during early pregnancy, as first reported from Australia by N. M. Gregg[35] and confirmed by many other workers, passive protection against this disease in the pregnant woman assumes an added significance. In 1943 and 1944 two experiments on rubella were conducted in Philadelphia, one at the University of Pennsylvania Hospital and one with Dr. Waldo Nelson at Temple University Hospital. In the first study, a nurse with rubella intimately exposed 5 room-mates who had no history of the disease. No secondary cases developed following the injection of 5 ml. of gamma globulin 4 days after exposure in each of the presumably susceptible adults. In the second study, an infant with rubella intimately exposed to the disease a ward of 13 infants and children who were presumably susceptible. No secondary cases developed following the injection of 2 ml. of gamma globulin 4 days after exposure. These results are recorded only for the purpose of suggesting the need for additional studies in this field. As in the other diseases, mentioned, the major portion of the population appears to be immunized in early life.

In pursuing a thesis such as this concerning a number of infectious diseases one may tend to oversimplify the problems involved. It must be remembered that although in measles there may be few or only slight antigenic differences in the causative viruses, this is not true in either influenza A or B, nor is it true in poliomyelitis. The pooling of a large number of plasmas would possibly permit the "coverage" by antibodies of many strains of a single type of virus, but such "coverage" must be determined experimentally. Also, the small amount of protective antibodies in convalescent mumps plasma has been pointed out and our experiments with Dr. Enders have indicated that many individuals are immune despite a lack of measurable antibodies in their plasma. When heated antigen is injected intradermally in such immunes, an immediate recall of antibodies in the plasma occurs; a fact which is not characteristic of the susceptible. This illustrates the importance of tissue or cellular immunity entirely aside from circulating antibodies, and tissue or cell resistance in mumps may possibly be more important than circulating antibodies. We do not know the relative importance of tissue immunity and circulating antibodies in poliomyelitis.

In diseases, however, in which the virus circulates through the blood stream during the early stages, gamma globulin may be far more effective. During the past winter, in conjunction with Dr. Gellis, it was found that 5 ml. of gamma globulin injected parenterally did not protect children

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against influenza B. For this disease amounts of globulin may be necessary, which would alter considerably the total level of plasma antibodies and be reflected in the antibody level of secretions of the respiratory tract. Antibodies in globulin from pooled plasma would be useful for following epidemic trends in influenza but of little use in a disease such as mumps.

Conclusions

1) Vaccination against influenza A. & B. appears to be increasingly successful, but a considerable period of time will be required before the best methods of active immunization have been attained.
2) Many epidemic diseases of childhood gradually immunize the general population both by apparent and inapparent cases and leave in passage considerable amounts of antibodies in adult plasma.
3) When such adult plasma is pooled from thousands of individuals it probably contains fairly uniform titers of antibodies, the changes in which, if readily measurable, afford an index of epidemic trends in certain diseases.
4) Gamma globulin from fractionated pools of plasma concentrates and preserves such antibodies in a readily usable form, which thus far apparently has been free from the danger of serum hepatitis.
5) The amount of specific protective antibodies in the gamma globulin and their effectiveness against each epidemic disease obviously differs and must be determined in each disease. In certain epidemic diseases outlined, they are highly effective.

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continued on page 442

THE FUTURE OF MEDICINE*

JOHN F. KENNEY, M.D.

The Author. *John F. Kenney, M.D., of Pawtucket, R. I. President, Rhode Island Medical Society, 1945-46; Chief, Medical Division and Director of the Laboratory, Memorial Hospital, Pawtucket, R. I.; President, New England Conference, American Association of Industrial Physicians.*

TODAY it is my responsibility as retiring President to give an account of my stewardship for my tenure of office from May, 1945, until May, 1946.

If you have been following the reports from time to time in the RHODE ISLAND MEDICAL JOURNAL, and yes, even in the daily newspapers, you are aware of the fact that it has been a very busy year.

At the outset let me thank the Officers, the members of the Council and of the House of Delegates, the many Fellows of the Society serving on the various committees, and also our executive secretary whose enthusiasm and work goes far beyond the limits called for in his position. It is with these members that I have been able to carry on, and particularly in the last quarter of my term when I was incapacitated.

In my induction message last year I said it was to be a year of medical economics, which it proved to be, necessitating more than the usual number of meetings of the Council, the House of Delegates, and the various committees to take up such subjects as the vocational rehabilitation program, both civilian and veteran, the amending of the state cash sickness compensation law as regards the medical phases of it, meetings with leaders of industry and insurance to consider the medical problems of the workmen's compensation program, the study of a voluntary prepaid surgical insurance plan, and other equally important matters. Many of the meetings were initiated by non-medical groups, and the Society was most willing to cooperate in the discussion of possible improvements in any programs involving the medical care of the public generally.

Your President, representing the Society, addressed a number of large organizations, including the Connecticut State Medical Society and the New England meeting of the Industrial Nurses' Association.

Two outstanding accomplishments were the formation of the Council of the New England State Medical Societies, and the development of a plan for voluntary prepaid surgical insurance in Rhode Island. The New England medical council was suggested by Dr. Michael H. Sullivan, a former President of our Society, and it was furthered by my immediate predecessor, Dr. Elihu S. Wing. The first and second meetings of this new Council were held in Providence and were enthusiastically attended by representatives from each of the New England state societies. In its first year this Council has accomplished considerable and it is my firm belief that if this and similar organizations formed on a regional basis had been started a few years ago so-called state medicine would have made little headway.

The prepaid voluntary surgical insurance program has become a reality after considerable work by the study committee and by the House of Delegates. We are proceeding carefully in developing the program, and it is my belief that the surest way to start a good plan is not to rush forward with an inefficient, unworkable program that will have to be amended radically, or discarded, within a short time. Therefore I recommend continued careful study and planning to any and all such plans before launching them upon the public.

What about the future of medicine?

All we need to insure good medical care in the future is to educate the general public as well, or better, than the forces already at work who paint the picture so bright describing what they think the public wants or what the government should give them that they would have us believe that we will live in a "Shangri-La." These forces have used all such media as the newspaper, radio, motion pictures, public speakers, etc., and they are always ready to address any group, large or small, but always with publicity for themselves. We have right on our side and we have proved to the world that here in America we have, and have had, the best medical care in the world. The Profession has been satisfied to stand by and to point to its results, but our trouble has been that we have not turned the spotlight on our efforts, nor "beat the drums"

* Presidential Address delivered before the 135th Annual Meeting of the Rhode Island Medical Society, at Providence, May 16, 1946.

loud enough to awaken the public to the achievements of medicine in this country. The groups who advocate a change in the pattern of American Medicine take advantage of our failure in this respect, and though they are in a minority, they are well organized for their task.

Groups of medical men, both general practitioners and specialists, dentists, hospitals, nurses, and pharmacists should concentrate on a definite plan, as the services of all will be affected if this minority has its way.

Who among the physicians of this state, having explained to a patient exactly what the new concept of medical care would be, would receive the answer that state controlled medical care in any form is preferable? That is why I stress the need for education on the part of the public and, if carried out successfully no physician or group of physicians will ever have to interview or attempt to sway any legislative body to protect the health of the public.

With this in mind let me speak of two organizations that I hope will soon come into being and you will see how they would work along the lines of education as to what medicine has already done and what may be necessary in the future.

First, the Women's Auxiliary to the Rhode Island Medical Society, for which the House of Delegates last week authorized the appointment of a committee to initiate an organization meeting. Such an organization, developed along lines approved by the American Medical Association, and already in existence in forty-two states, should prove a valuable affiliate to our historic Society. Secondly, a statewide health council of professional men and laymen to consider all matters of health throughout Rhode Island. Your Council has already approved of the appointment of a committee to consider the feasibility of such an organization along lines advocated by Dr. Emery M. Porter and Dr. Elihu S. Wing.

We can all agree, both medical and lay persons, that times are changing. Our various medical groups are trying to meet that change, but first and last we must all think in terms of what will be the final result in the care and well-being of the patient, both from a health and financial standpoint. We must not think in terms of how many dollars and cents the federal government will spend, or how comfortable it will be for the physician to practice under state control. Both you and I can prove beyond a doubt that any system of state control put forth so far by the government planners will result in a setback for proper patient medical care for many years to come.

Looking to the future we may continue to have the best health of any country in the world, and under our non-government control we will go on improving our various postgraduate and specialty programs, setting high standards for hospital practice, and increasing the requirements for excellence in educational training as a prerequisite for licensure. On the other hand, under government control we would find the same high ideals and standards attempted by a group of high type medical men whose vocation to medicine, and love of their fellowman, were the incentives to enter the profession. But later the efforts of these physicians would be replaced by politically-minded individuals whose principles will not be concerned with the best care for the patient, or continued study in medicine, but rather the desire to improve their position by currying the favor of the political powers administering the medical and health programs.

No honest man can deny that the type of man entering medical service under the government system as proposed in compulsory health legislation will be the same high type of man that now, or in the past, entered the profession. True, none of this change would happen overnight, but we would certainly see a continual and gradual breaking down of all standards of the medical profession as we now recognize it, as well as those of the hospitals and the medical schools.

I conclude by repeating to you my belief that the decision is yours, gentlemen; for I am sure that no reasonable citizen of this state will accept any lowering of the medical care for himself or his family, and it is up to you to show him clearly just what he would really receive under a compulsory federal plan.

Dr. John F. Kenney, of Pawtucket, retiring President of the Rhode Island Medical Society, turns over the gavel to his successor, Dr. Herman C. Pitts, of Providence.

The RHODE ISLAND MEDICAL JOURNAL

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NARRAGANSETT BAY

We print in this number the report of the Committee on Water Pollution made at the last meeting of the Providence Medical Association. That this is a matter of great interest to the general public is evidenced by the prominence given it by the Providence *Journal* and *Bulletin.*

If there is such a thing as an axiom, we think it can be taken for granted that Narragansett Bay is a nasty place. Waste products from innumerable manufacturing plants pour into it, oil from many sources shows its presence by greasing the shores and the hulls of crafts on its waters and by killing the wild fowl that frequent it. And most revolting of all, raw sewage from communities of many thousands of human beings is dumped into it continuously. When Roger Williams landed here, it must have been one of nature's fairest spots. Jean Valjean who swam the sewers of Paris would now hesitate to dive into the upper bay.

The part of the report that occasioned the most public discussion dealt with the danger of contaminated shell fish. Many recent stories in the public press regarding the "bootlegging" of quahaugs make it reasonably certain that these bivalves taken wherever they may be found have been sold in not inconsiderable numbers. At least one professional quahauger was quoted in the daily paper as using "rule of thumb" methods to determine the healthfulness of his product. Our sympathy goes out to the organized shellfish industry. They have been great sufferers from the increased pollution, and no one doubts their earnest desire for improvement. We are sure they are doing their utmost for a clean product.

But what definite information have they and the public regarding the water conditions below Conimicut Point? According to a report to the State Planning Board of 1940, "there has been a continuous expansion of the contaminated region of the upper bay, accompanied by a transformation of the once clean bottom to a foul-smelling mud unfit for normal marine life of any sort. The range of foul bottom extends in places far beyond the restricted water zone." Does anyone suppose conditions have improved with the increased industry of the war years? Crooks in this country are presumed to be as innocent as Sunday School superintendents until proved guilty beyond doubt. We have been told that in France they are guilty until they have established their innocence. In all health problems the French method should be used. The waters of our bay are under grave suspicion. We think that frequent reports with figures should be published as in the case of our excellent milk sup-

continued on next page

plies. When our high spring tides have pushed up to Crawford Street and Red Bridge and then have flowed swiftly down to the lower bay, frequent examinations at the end of the ebb should be made and reported. No one would be more gratified than the medical profession to receive good reports. But our shellfish beds should be like Caesar's wife.

The danger to our sea-food supplies is not the only problem, or even the greatest, that confronts us. After all, we can get fish and shellfish from other places. The recreational and health-giving opportunities that our naturally beautiful bay should provide for this great population can be used only if they are near at hand. The privileged few can ignore this contaminated cesspool and hie themselves to the clean mountains and shores of Cape Cod and Maine. The great mass of our inhabitants must be able to take a few hours off for smoke-free air, clean water and a handsome countryside, or they will have to do without them. And Providence is notoriously unprovided with even the help of an adequate park system. Disinterested citizens did much work a few years ago in the hopes of improving this disgusting situation. But the project died aborning. The difficulties probably seemed insurmountable. Industry undoubtedly wished to cooperate, but the costs were enormous and why clean up when communities "corrupt and contented" continue to dump their sewage into the streams?

Now the war is over we trust that courage will be revived and another effort made. A medical profession not called upon for help before will gladly do their humble part now.

DR. BUFFUM RETIRES AS SECRETARY

Coincident with the 1946 Meeting of the Rhode Island Medical Society Dr. William P. Buffum of Providence retired from the position of Secretary of this organization after 5 years of outstanding service. Dr. Buffum's energy and ability have stimulated his colleagues for many years in numerous activities, and his influence as Secretary of our State Society during this term which has overlapped the strenuous war years has been great. Conscientious participation in the activities of a medical society, either as an officer or a committee member, calls for hard work, the expenditure of much time, and, as any physician who has served in such a capacity at any time knows, there is frequently little apparent appreciation or thanks from those who have received the greatest benefit. For years Dr. Buffum has served on a great variety of committees, not only in our State Society but also in other medical organizations, and his reputation for getting things done efficiently and graciously is well known to all who have worked with him. Among Dr. Buffum's many other activities were his Presidency of the Providence Medical Association in 1935, his present positions as Chief of the Pediatric Service and President of the Staff of the Rhode Island Hospital, and his recently assumed responsibility as State Chairman for Rhode Island of the American Academy of Pediatrics, which is at present sponsoring a nation-wide survey of child health services. We are grateful to Dr. Buffum for what he has done for the Rhode Island Medical Society for many years and particularly so for his invigorating occupany of the position of Secretary, 1941-1946.

HEALTH FUNDS

Governor Pastore in his graceful and pertinent talk at the annual meeting of the Rhode Island Medical Society suggested the possibility of diverting some of the funds of the Infantile Paralysis Foundation to the rheumatic fever campaign. In the light of what has been emphasized by a recent series of articles in the Providence *Journal-Bulletin* this matter warrants serious consideration. The American public is prone at times to let its heart run away with its head. Here we have a case in point. Even the bitter political opponents of the late President Roosevelt would have to admit that the manner in which he met and triumphed over the terrible calamity of his paralysis was an inspiring example of courage and perseverance. With his name and association to support them enthusiasts developed this organization to fight poliomyelitis and started one of the most successful campaigns in our history to raise funds.

This is highly laudable and worthwhile. But in their zeal they forgot the doctrine of the greatest good to the greatest number, an abstract proposition never arousing the sympathy that concrete cases do. There are a comparatively small number of victims of infantile paralysis. The sufferers from cancer and rheumatic heart disease are tremendous in number. There is a terrifying vividness when a fine specimen of humanity is suddenly stricken by polio, but, as Governor Pastore pointed out, although this is visible it is no more real and often less of a hardship than the diseased heart.

We think Governor Pastore's view of this whole matter is a broad one and we trust that some definite and constructive action may follow.

R. I. HOSPITAL ESTABLISHES INSTITUTE OF PATHOLOGY

OFFERING pathological and clinical laboratory services to other, and especially smaller, hospitals throughout the state, the Rhode Island Hospital has established an Institute of Pathology.

The hospital's board of trustees, with the cooperation of the medical staff, has made possible the development of this Institute of Pathology, the details of which have been developed by B. Earl Clarke, M.D., director of the hospital's department of pathology, and Oliver G. Pratt, executive director of the hospital. It was felt that the organization of a centralized Institute of Pathology offers distinct advantages to medical and hospital organizations throughout the entire state, especially to those smaller ones that cannot by themselves attract or maintain the high caliber of specialized staff necessary to modern scientific pathologic techniques, and that lack the highly specialized equipment and facilities on which pathologic science is dependent.

The initial program offered to hospitals now participating in the plan includes:

1. Attendance of an Institute pathologist at clinical-pathologic conferences, tumor clinics and any other such scientific meetings as those hospitals participating in the plan may wish to arrange through their own medical staffs.

2. The daily processing of surgical specimens with complete pathologic reports. The installation of a new autotechnicon has greatly speeded up this service.

3. A detailed service, by appointment, for immediate pathological study, with frozen sections if necessary, at time of operation in cases suspected to have cancer, as arrangements are made by participating hospitals in accordance with their particularized needs.

4. The performance of autopsies in the pathological departments of the affiliated hospitals with processing of microscopic preparations from autopsy material at the Institute.

5. A carefully planned system of resident, refresher courses for technicians, to be held in the Rhode Island Hospital, with the provision by it of substitute technicians to serve the affiliated hospitals during the absence of their technicians receiving the educational training.

6. Supervision of clinical laboratory work at the affiliated hospitals by the Institute's biochemist and bacteriologist, with unusual and complicated chemical and bacteriological procedures conducted at the laboratories of the Rhode Island Hospital.

Those primarily responsible for organizing the Institute believe that as it grows new opportunities for significant contributions to medical science and to the state's hospital service will evolve. A complete educational program is anticipated which will include the preparation of young men for National Board certification, a school for technologists, professional staff meetings, regional and state conferences, participation in specialized clinics, the teaching of interns and residents and, perhaps, of nurses, and an "ever-expanding acceptance of educational challenges within the Institute's scope of operation." It also has been suggested that laboratory service might be offered to individual physicians.

In addition to the pathologist-director, the staff is expected to include at least four assistant pathologists, with one specializing in neuropathology and one specializing in the pathology of blood forming organs and hematology, a bacteriologist and a biochemist, all assisted by technicians. Research is to be emphasized in all fields of work.

Although well in advance of most hospital practice, the organization of centralized services to serve all citizens of the state, through their local community hospitals, is in line with recommendations of national medical and health authorities who urge large, well-staffed and well-equipped hospitals to give leadership in state and regional integration of hospital services. A few of the nation's outstanding hospitals have successfully demonstrated that such coordination is practical and of inestimable value both to the hospital dispensing the service and to those receiving it. This is the first carefully planned organization of its type in Rhode Island.

The advantages of the Institute of Pathology which warrant particular attention include the amount of experience and resulting ability that is gained by participating pathologists through the

continued on page 458

HOSPITAL ASSOCIATION OF RHODE ISLAND

THE PROVIDENCE LYING-IN HOSPITAL

THE Providence Lying-In Hospital has been approved by the A.M.A. for training of residents. There has always been a close affiliation with the Rhode Island Hospital which may be strengthened by a contemplated combined obstetrical-gynecological residency. This will make more intensive use of the educational advantages offered by the wealth of clinical experience and material at hand. At present, in addition to the two residents there are three internes. These internes for some time have been discharged medical officers renewing their skill before returning to practice. There are also two medical students from Tufts and two from Harvard Medical School.

During April and May, in association with the Pediatric Staff of the Rhode Island Hospital, and as part of a comprehensive course given by the Pratt Diagnostic Clinic of Tufts Medical College, the staff of the Lying-In has given a two week series of lectures, demonstrations, and informal round table discussions. This has been carried out under the direction of Dr. Bertram H. Buxton and Dr. John G. Walsh. The program as carried out for three groups of returning and newly released medical officers follows:

Monday	
Introductory Remarks	Dr. Buxton
Prenatal Care	Dr. Paul Appleton
Tuesday	
Pelvimetry and Pelvic Anatomy X-ray Conference. Pelvimetry and Pelviography	Dr. Alfred L. Potter and Dr. Russell Hunt
Obstetrical Nursing	Miss Helen Murdoch
Wednesday	
Classification of Toxemias	Dr. Walter Jones
Induction of Labor, etc.	Dr. Craig Houston
Thursday	
Clinical Conference.	Staff
Rh Factor	Dr. Wm. MacDonald Dr. George Tully
Rh typing, Laboratory Tests.	Miss M. deSilva
Hemorrhage in Obstetrics	Dr. B. H. Buxton

Few in Rhode Island, unless they were interested in the statistics of births, read the Hospital Number of the A.M.A. Journal for April 20, 1946 (Vol. 130, No. 16) carefully enough to place the Providence Lying-In Hospital among the other obstetrical hospitals of the country. For the year 1945 being reported this hospital with 5,272 deliveries was second in the United States. Only at the Margaret Hague in Jersey City with 6,726 were more babies delivered. We had again passed Israel Zion, of Brooklyn, and St. Joseph's Infirmary of Houston, Texas, where 4,917 and 4,836 were born.

The other hospitals in New England reporting more than 2,000 births were the Hartford Hospital, sixth in the United States with 4,663; the Boston Lying-In, forty-third with 2,498; the Boston City Hospital, fifty-ninth with 2,336; and the Bridgeport and St. Vincent's Hospitals in Bridgeport, and Wesson Maternity of Springfield.

To finish with statistics, of the 13,622 births in Rhode Island reported for the year 1945 the A.M.A. figures show the following hospital figures:

Providence Lying-In	5,272 births
St. Joseph's Hospital	1,198
Homeopathic	1,137
Newport	1,046
Woonsocket	1,040
Memorial Hospital, Pawtucket	1,027
Notre Dame, Central Falls	546
Westerly	422
South County Hospital	341
Miriam Hospital	309

Friday	
Abortion and Moles	Dr. John F. Murphy
Premature Separation of the Placenta	Dr. John G. Walsh
Monday	
Treatment of Toxemias	Dr. Walter S. Jones
Cesarean Section	Dr. A. L. Potter
Tuesday	
Anaesthesia in Obstetrics and Resuscitation of the Newborn	Dr. Meyer Saklad
Soft Tissue Placentography and X-ray of the Fetus	Dr. Russell Hunt
Placentography	Dr. Charles Potter
Analgesia and Anaesthesia in Obstetrics	Dr. Tully

continued on next page

PROVIDENCE LYING-IN HOSPITAL

continued from preceding page

Wednesday

The heart in Pregnancy	Dr. Guy Wells
Diabetes in Pregnancy	Dr. Frank Matteo
Clinical Phenomena of Labor	Dr. Walsh
Forceps Delivery	Dr. Geo. Waterman

Thursday

Clinical Conference	Staff
Fetal Abnormalities	Dr. Appleton

Friday

Breeeh Delivery	Dr. Ralph DiLeone
Round Table Conference	Staff

One more group is at present planning to take this refresher course. Doctors throughout the state are invited to attend this course during the first two weeks in July. There is a round table conference held at the hospital at nine every Thursday morning to which the doctors of the state are invited. And of great interest is an X-ray conference held promptly at eleven on alternate Tuesday mornings by Dr. Russell Hunt. Any one is welcome who is interested.

For six months all patients, ward and private, have had routine prenatal blood typing and Rh factor determinations. The blood bank at the hospital is already paying dividends in lives saved and interest in improved morbidity figures by combating anemia.

With the return of Dr. Frederic Ripley now on terminal leave the last member of the obstetrical staff will have returned to civilan practice. The other members of the obstetrical staff who have previously been released from the army or navy are: Dr. George E. Bowles, Dr. Jarvis D. Case, Dr. George F. Conde, Dr. John A. Gormly, Dr. Richard E. Haverly, Dr. Walter S. Jones, and Dr. Joseph C. Kent.

The following have returned to the pediatric or consulting staffs: Dr. Reginald Allen, Dr. Robert Baldridge, Dr. William P. Davis, Dr. Banice Feinberg, Dr. F. Charles Hanson, Dr. Herman Lawson, and Dr. Ernest Thompson. Two men are still in active service, Dr. Eric Stone and Dr. Elihu Saklad.

DR. ALFRED L. POTTER, *Chief of Staff*
DR. HARMON P. JORDAN, *Superintendent*

RECENT STUDIES IN PREVENTION OF CERTAIN INFECTIOUS DISEASES

concluded from page 430

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A DEVICE FOR HOLDING INTRANASAL TUBES

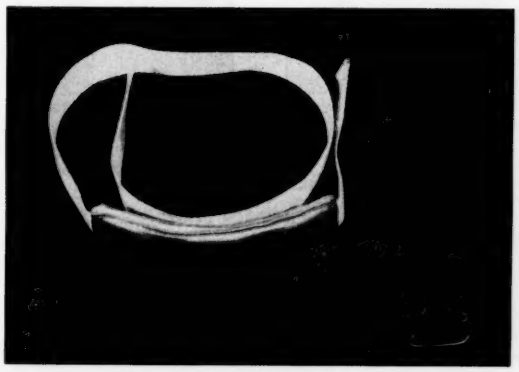
NELSON C. FONTNEAU, M.D.
Former Intern, Rhode Island Hospital. Now serving with the U. S. Army.

THE purpose of this paper is to present a device for holding in place such tubes as the Miller-Abbot, Levine, and others which are passed intranasally and allowed to remain in place over more or less extended periods of time. The author realizes that several devices for this purpose are in production on a commercial basis, however, the one described here is capable of being made in the orthopedic appliance shop of any moderate-sized general hospital.

The apparatus is constructed in the form of a head-band with a 1″ by 4½″ strip of light metal, curved to conform to the forehead, padded with flannel, covered with soft leather, and incorporated in a 1″ webbing strap which goes around the head. The webbing strap is provided with a buckle to allow adjustment for head size. Projecting from the center of the metal portion of the headband at a right angle, is a 1″ by 1½″ bracket, which is fastened to the headband by rivets. The projecting corners of this bracket are rounded off and its end is drilled to accommodate a 3/16″ stovebolt. A piece of flat stock 1″ by 1½″ is then slotted along its center with a 3/16″ by 1⅛″ opening and to this is brazed a wire loop of 1/16″ material, shaped like a "U" with a small indentation on each limb of the "U". This latter assembly is fastened to the bracket of the headband by means of a short 3/16″ stovebolt, equipped with wingnut and lockwasher.

In use, the device is adjusted to a comfortable fit on the head, with the bracket over the forehead. The intranasal tube is then lead through the wire loop of the apparatus and is held in place there by a small elastic band passed on either side of the tube between the indentations on the limbs of the "U". The position of the tube may then be adjusted by sliding the bracket extension along the slot and/or by swinging the extension on one side or the other, the desired position being held by setting the wingnut on the bolt.

The use of this apparatus eliminates adhesive tape in holding intranasal tubes in place and hence not only prevents the tubes from falling out of place when tape is loosened by perspiration but also is more comfortable for the patient to wear. By adjusting properly the extension bracket, local pressure of the tube on the ala nasae may be relieved. The device described here has been in use for nearly a year at the Rhode Island Hospital where it has been adjudged an improvement over previous methods by staff members, nurses, and patients alike.



ANTI-POLLUTION DRIVES THROUGHOUT NATION SPURRED

Tightening of pollution controls in several states has put sewage and industrial waste disposal systems among foremost public works in cities from coast to coast, the American Municipal Association reports.

Indicative of nationwide interest in pollution control is a federal bill recently approved by the house rivers and harbors committee. The measure would provide $100,000,000 a year aid to construction of state and municipal sewage disposal plants.

State and interstate action is spurring municipal interest in pollution control. A seven-state pact to consolidate efforts aimed at cleaning up the Ohio river recognizes elimination of industrial wastes and sewage disposal as prime postwar projects. The Ohio division of conservation and natural resources has authority to obtain injunctions prohibiting pollution that destroys wild life and to sue for damages in event of contamination.

A recently enacted Virginia anti-pollution measure provides for creation of a state water control board to control disposal of sewage and industrial wastes. Washington's new state pollution control commission is directing activities of more than 60 cities that have authorized or are planning modern sewage disposal systems. Washington and Oregon are cooperating in a drive to reduce pollution in the Columbia River.

Pennsylvania's sanitary water board recently announced that 95 per cent of cities accused of polluting public waters have been notified to prepare plans for sewage treatment plants. More than 500 municipalities are involved. The Pennsylvania state health department plans to reduce pollution along the Schuylkill River by means of a campaign against municipal and industrial wastes. Controls are being imposed especially on collieries to reduce coal slack in the Schuylkill, which is one source of Philadelphia's water supply.

Pulp and paper manufacturers of North and South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, Texas and Arkansas plan to establish a research unit at Louisiana state university to help solve the industry's stream pollution problem. Similar research is underway in Alabama and Texas.

California cities are speeding completion of sewage disposal plans as a result of a recent state order to halt dumping raw sewage into coastal waters by the end of 1946. Six San Francisco bay cities including Oakland and Berkeley will vote in November on a $15,000,000 bond issue to finance a central sewage disposal system. San Diego officials indicate the city's $3,764,000 sewer program may be delayed because of lack of materials. Los Angeles is reviewing plans for a $3,000,000 submarine sewer, part of its $23,000,000 postwar sewage disposal program.

—News Bulletin of the Public Administration Clearing House, Chicago, May 23, 1946.

DISTRICT MEDICAL SOCIETY MEETINGS

PROVIDENCE MEDICAL ASSOCIATION

A regular meeting of the Providence Medical Association was held at the Rhode Island Medical Society Library on Monday, May 6, 1946. The meeting was called to order by President Paul C. Cook at 8:30 p. m.

The reading of the minutes of the previous meeting was omitted.

The Secretary reported the receipt of an invitation from the Rhode Island Section of the American Chemical Society inviting the members of the Providence Medical Association to attend a meeting on May 10 at which Dr. Max Lauffer is to be the speaker.

The Secretary reported for the Executive Committee as follows:

At its recent meeting the Executive Committee of the Association took the following action:

It approved of a survey of the membership in cooperation with the Occupation Adjustment Committee of the Community Workshops of Rhode Island on the question of the prevalence of epilepsy in this area.

It voted to send out a card questionnaire to all members in order to secure a list of those physicians willing to accept emergency calls in the day or in the night, and it voted that such a list be submitted to the physicians exchanges, the New England Telephone Company, and the police department for their reference.

It voted to recommend to the Association that it endorse the survey of child health services being undertaken by the American Academy of Pediatrics in cooperation with the Rhode Island Medical Society, and also to recommend the appropriation of the sum of $25 from the Association's funds towards the financial expense of the study.

It voted to accept the report of the sub-committee that studied present and proposed fees for home and office visits, and to send a copy of the report to each member of the Association.

It voted to consider any existing written fee schedule of the Association as obsolete.

It voted to accept the report of the committee on the study of a central telephone exchange, and to send a copy of the committee's report to each member of the Association.

It voted that the written records of the minutes of the meetings of the Association dated from 1848 be microfilmed for their better preservation.

It was moved that the report be accepted. The motion was seconded and passed.

The President called attention to the recommendation of the Executive Committee of the Association to endorse the Child Health Surveys and make an appropriation towards the financial support of the program. Dr. B. Earl Clarke moved that the Association adopt the recommendation made to endorse the Child Health Services Survey and also that it appropriate the sum of $25 from the Association's funds to assist in the study. The motion was seconded and unanimously adopted.

Dr. Peter Pineo Chase, Chairman of the Committee on Water Pollution, read a report from his Committee, a copy of which is attached and made a part of these minutes.

It was moved that the report of the Committee on Water Pollution be accepted. The motion was seconded and passed.

The Secretary reported that the Executive Committee recommended to active membership in the Association the following doctors:

Luther Lewis, M.D.	Jacob Stone, M.D.
Carroll Silver, M.D.	Joseph M. Zucker, M.D.
William J. O'Connell, M.D.	Nathan J. Kiven, M.D.

Dr. William M. Muncy moved the unanimous election of the physicians nominated for active membership by the Executive Committee. The motion was seconded and adopted.

President Paul C. Cook announced that Dr. Frank M. Adams had been appointed by him as a member of the Committee on Air Pollution.

The President reported that the Association had lost several of its members within the past few months by death, and he stated that tributes to these deceased members had been prepared by committees of the Association and that these tributes had become part of the permanent records. He read the following list:

Milton Korb, M.D.	Alanson D. Rose, M.D.
Michael B. Milan, M.D.	Howard Keefe, M.D.
Edward Campbell, M.D.	Raymond G. Bugbee, M.D.
Michael J. O'Neil	

Dr. Cook called for the membership to stand in silent tribute to the memory of these deceased members.

Dr. Cook introduced Dr. William H. Fischer of the Rhode Island Hospital. Dr. Fischer presented a case report entitled, "Quartan Malaria Following Transfusion." Three donors had been used, all of whom, on subsequent questioning, gave a history of malaria over forty years previously. Blood used had been stored in the blood bank at least five days.

continued on next page

DISTRICT SOCIETY MEETING

concluded from preceding page

There was an interval of sixty-six days between the transfusion and the onset of clinical malaria. At the height of the first chill studied, the parasite density was sixty parasites per cubic mm., which is a distinctly low figure.

Dr. Cook introduced as the guest speaker of the evening Dr. Robert R. Linton. Dr. Linton spoke on "Thrombo-Embolic Disease—Prevention and Treatment."

He pointed out that thrombi originate most frequently in the posterior tibial and peroneal veins, and that they are adherent there. From this origin, they propagate upward, and then are not adherent, and at this higher site may break off and cause emboli. The highest incidence of cases follow surgical operation, particularly those for intra-abdominal malignancy. Approximately 82 per cent of cases occur in patients after the age of forty. From 1937 to 1945, 1,057 patients had 1,949 femoral veins ligated. Experience thus far has shown little or no evidence of subsequent edema or pain following this operation. The most important indication for this operation would appear to be evidence of pulmonary infarction. In 96 per cent of cases with pulmonary emboli, the emboli lodged in the lower lobes, so that this is the site to look for them in the x-rays. As regards technique, one important point is that the incision should parallel the large vessels to have adequate exposure for control of possible hemorrhage. Ligation of the inferior vena cava was discussed, and is a considerably more formidable procedure which should be reserved for special situations only. In general, early ambulation of surgical patients is a desirable procedure to prevent thrombo-embolic disease. Dr. Linton showed several interesting slides illustrating the points discussed, and a short movie in color well illustrating a typical operation for aspiration and ligation of the superficial femoral vein.

The meeting adjourned at 11:05 p. m. Collation was served. Attendance: 112.

Respectfully submitted,

FRANK B. CUTTS, M.D., *Secretary*

WATER POLLUTION

Report of the Providence Medical Association's Committee on Water Pollution Accepted by the Association at Its Meeting on May 6, 1946.

A MEETING of the Committee on Water Pollution of the Providence Medical Association was held on April 23, 1946, and the problem was discussed from its various angles.

The pollution of Narragansett Bay is a huge problem and one which will require a great deal of money and time to correct. The pollution involves not only the small rivers which make up the head waters of Narragansett Bay but also the regions nearby, such as Newport, Wickford, Quonset Point, Mount Hope Bay and East Greenwich Bay. The correction of the Moshassuck, Seekonk and Woonasquatucket Rivers will help a great deal but will not solve the problem. That extensive pollution exists is a know fact. What is not known is that the bay as far down as Prudence Isle is probably contaminated. The line drawn at Conimicut Point infers that this large area between Conimicut and Prudence is free of contamination, and in this area there are a large number of shell fish growing. This means that probably contaminated shell fish are being allowed on the open market.

The Rhode Island State Board of Health should make a survey of the entire area as there has been no real examination of the bay in the last twenty years. The law, as it is now written, allows penalties against all the contaminators except for those in Newport and Jamestown. Why these two communities should have been exempted is hard for us to understand. They have just as much of a moral obligation to keep the bay clean as have the other offending communities. The contamination is extending farther down the bay with years as evidenced by the fact that tin 1912 21,000 acres were allowed for the cultivation of shell fish. This yielded a 2,000,000 crop and a rental revenue to the State of $135,000. The last figures available show the acreage has been reduced from 21,000 to 1,975 and the rental to the State has been reduced from $135,000 to $7,806.

In regard to the pollution by industry there is no question but that the major concerns are more than willing to do whatever is necessary to correct this. There is only need of a master plan and a feasible method of financing it.

In regard to the oil, and this is a sore spot to the bathers, the hunters, and the fisherman, much can be done. Your committee understands that it is customary for the oil industry to store gasoline in tanks which have a metal base, but that the tanks which are used for the storage of the heavy oils have no such bottom. Because of this the oil seeps through and makes its appearance in the bay by gravitation through the various layers of sand. We were astounded to learn that borings show that there is a heavy oil sediment through approximately 12 feet below the bottom of the upper bay. There is no question but that legislation can be and should be enacted which will correct this defect. No more storage tanks which are not absolutely leak proof should be allowed in Rhode Island and the larger tanks which are the source of this contamination should be made leak proof. Unless something along this line is done, this oily layer will increase and be a real source of trouble in the future.

The problem of oil leaking from tankers and from the various connections used in emptying these tankers is serious and in order to prevent this, strict adherence and enforcement of existing laws is necessary.

There are many organizations interested in the correction of this problem. Each organization has a committee working from the particular angle in which they are vitally interested. We feel that it might be well worth while for all these committees to get together, organize and then to apply pressure so that our bay may again become a recreational attraction for our State.

As a Medical Society, we are primarily interested in the medical angle and wish to emphasize the following:

That pollution of the shellfish is a health hazard. That it is going on and that nothing really is being done to keep these polluted shellfish away from the people. Many of the contaminated areas are being used by private individuals and by organizations and both of these are a source of a good deal of trouble.

Recently the bay patrol, which is altogether too inadequate for the purpose, arrested quohaugers in

continued on page 458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WATER POLLUTION REPORT

concluded from page 456

the lower Mount Hope Bay and above Quonset. Both of these areas are contaminated.

As a Medical Society we are interested in seeing that all the natural recreational areas in our community are made available to the people of the State. Recreation is essential for good health, but Narragansett Bay with its pollution, instead of being a helping factor, can easily become the source of a mapor epidemic. It is our feeling that this improvement should be carried out without interference from the political parties.

We feel that a private corporation, something like the N. Y. Bridge Authority, can be formed and that the cost of the program can be spread over a period of years. The source of the income will be derived from those who contaminate the bay plus both State and Federal aids.

Respectfully submitted,

EDWARD S. CAMERON, M.D.
ANTHONY V. MIGLIACCIO, M.D.
PETER PINEO CHASE, M.D., *Chairman*

R. I. HOSPITAL INSTITUTE OF PATHOLOGY

concluded from page 437

pooling of pathological material and the development of experts in special fields of pathology, as, for example, in neuropathology, hematology, gynecological pathology, the pathology of children and other specific aspects of an ever-widening science. At the same time that the individual has the opportunity to become an expert in that phase of pathology that particularly interests him, his association and study with a group will make him a better general pathologist, it is believed. Instead of the opinion of one man, combined study by the group will be directed on puzzling pathologic problems.

It is pointed out that each hospital gains the advantage of all this special knowledge in pathology, chemistry and bacteriology—large hospitals as well as small ones.

The Rhode Island Hospital points out that statewide extension of its pathological and laboratory service, through the Institute, also strengthens its own work and its own services to patients, particularly in that it makes possible a competent and well-balanced staff that a single hospital might not be justified in trying to maintain alone. It emphasizes that the plan must be considered in terms of its service to all citizens and physicians in the state and its potential value to them as well as in terms of a coordinated service to individual hospitals and to medical groups.

HOUSE OF DELEGATES
of the
RHODE ISLAND MEDICAL SOCIETY

Report of Meeting held on May 8, 1946

A REGULAR meeting of the House of Delegates of the Rhode Island Medical Society was held at the Medical Library, Wednesday, May 8, 1946. The following delegates and officers were in attendance:

Officers of Rhode Island Medical Society

Pitts, Herman C., *President-Elect*
Ladd, Joseph H., *Vice-President*
Buffum, William P., *Secretary*
Cutts, Morgan, *Assistant Secretary*
Ashworth, Charles J., *Treasurer*
Farrell, John E., *Executive Secretary*

Newport

Adelson, Samuel
Callahan, James C.

Pawtucket

Mara, Earl J.
Hanley, Henry
Henry, Robert

Providence

Baldridge, Robert
Belliotti, Joseph
Burgess, Alex M.
Buxton, Bertram H.
Calder, Harold G.
Chase, Peter Pineo
Crane, G. Edward
Cutts, Frank
Davis, William P.
Harrington, Peter F.
Jackvony, Albert
Lawson, Herman A.
Porter, Emery M.
Utter, Henry E.
Waterman, George

In the absence of the President, John F. Kenney, the Vice-President, Dr. Joseph H. Ladd, presided, calling the meeting to order at 8:10 p. m.

Dr. Ladd called for the report of the Committee on Postgraduate Education which was presented by Dr. Alex M. Burgess. A mimeographed copy of the entire report was submitted to each member of the House and Dr. Burgess read the report.

After reading Part I of his report, Dr. Burgess moved that this part of the report be received and placed on file. The motion was seconded and approved.

He then read Part II of the report, and he moved the adoption of it. The motion was seconded and passed. He then moved that publication of the list of specialists which is incomplete be confined for use in the office of the Society and not published or publicized until authority is given by the House of Delegates. The motion was seconded and passed.

Dr. Burgess read Part III of his report which was concerned with the care of veterans. He moved the adoption of Part III, to and including Subsection 3 of Section B, relating to the staffing of the veterans' hospital.

This part of the report was discussed and Dr. Charles J. Ashworth voiced objection to the adoption of the requirement that members of the hospital staff must be diplomates of their respective specialty boards, maintaining that it would be impossible for the Society to fulfill this requirement and authorize local physicians.

After a lengthy discussion, Dr. Burgess withdrew his first motion and moved that the House receive and place on file Part III of his report through Section B, Subsection 3, and without the final paragraph of Subsection 3 which makes the recommendation of the Committee. The motion was seconded. After a brief discussion the motion was passed.

Dr. Burgess moved that the House of Delegates, in receiving and placing on file the plan for medical care for veterans as discussed by General Hawley and as outlined in Part III of the report of the Committee on Postgraduate Education, does not thereby approve of that part of the plan as listed in Subsections 1, 2 and 3 of Section B, Part III of his report, requiring that the physicians must be diplomates of their respective specialty boards. The motion was seconded.

There was discussion of the motion, and Dr. George Waterman moved amendment to the motion to provide that the Society agree to fulfill the requirements of General Hawley's plan, as outlined by the Committee on Postgraduate Education, in so far as possible, and otherwise the Society will nominate candidates eligible for certification for the hospital staff membership. The amendment was seconded.

Dr. Ladd called for a vote of the amendment. The amendment was adopted.

After a brief discussion Dr. Ladd called for a vote on the original motion made by Dr. Burgess. The motion was passed unanimously.

Dr. Burgess completed the reading of Part III of his report and then moved that the final page of the report be received and placed on file. The motion was seconded.

Dr. Mara questioned the limitation of the supervision and arrangement of the training in the basic

continued on next page

HOUSE OF DELEGATES

continued from preceding page

sciences to the Department of Medical Sciences of Brown University and suggested that it might be made general to include all the colleges in the State. He therefore moved that the science departments of the academic colleges and universities of Rhode Island be requested to arrange and supervise the training in the basic sciences as recommended in Subsection 4 of Section B of the report of the Committee on Postgraduate Education. The motion was seconded and passed.

Dr. Ladd called for a vote on Dr. Burgess's original motion as amended. The motion was passed.

Dr. Burgess completed the reading of his report and then moved that the report as a whole, as amended, be received and placed on file. The motion was seconded and passed.

Dr. Harold Calder moved that the President be authorized to appoint a special committee on veterans' affairs as recommended in the report of the Committee on Postgraduate Education. The motion was seconded and passed.

Dr. William P. Buffum stated that the annual report of the Secretary would be published in the MEDICAL JOURNAL, and therefore he would omit the reading of it before the House.

Dr. Charles J. Ashworth summarized the annual report of the Treasurer and submitted a complete financial report for the year, 1945, to the House of Delegates. Dr. Pitts moved the acceptance and filing of the annual report of the Treasurer. The motion was seconded and passed.

Dr. William P. Buffum reported that a special committee appointed by the President to consider the advisability of a Women's Auxiliary recommended that the House of Delegates of the Rhode Island Medical Society authorize the establishment of a Women's Auxiliary and that it appoint as the Advisory Committee the President-Elect of the Rhode Island Medical Society for the coming year as Chairman and the President of each of the six district medical societies as members. The Committee also recommends that the Auxiliary program be on both a state and district basis, and that the Advisory Committee be asked to develop the organization in the immediate future.

Dr. Buffum moved the adoption of the recommendation of the Committee on the Women's Auxiliary. The motion was seconded and passed.

Dr. Peter F. Harrington, chairman of the Committee on Social Welfare, submitted the report of his Committee which incorporated recommendations regarding fees for home and office visits, night and day, regarding classifications of specialists, regarding referral of welfare patients to opthalmologists, and regarding the East Providence, Warren, Bristol Medical Care Experiment.

continued on page 465

HOUSE OF DELEGATES

continued from page 462

Dr. Henry E. Utter moved the adoption of the entire report of the Committee on Social Welfare.

Dr. Herman C. Pitts made a verbal report on the status of the Rhode Island Cash Sickness Compensation Program, and he explained the new amendments to the law enacted by the General Assembly at its recent session. It was moved that the report as submitted by Dr. Pitts be approved as presented. The motion was seconded and passed.

Dr. William P. Buffum reported on the actions taken by the Council since the last meeting of the House as follows:

"Since the last regular meeting of the House of Delegates, the Council has taken the following actions:

1. "It empowered the President to appoint a medical-dental committee.
2. "It moved that the Trustees of the Society Building meet as a Committee to clarify the responsibilities of supervision and maintenance of the Society's activities and of the library building.
3. "It approved in principle the development of a statewide Health Council, and authorized the President to appoint a Committee of 5 to study the possibilities of such a Council.
4. "It approved of the appointment by the President of a committee to report to the House of Delegates on the advisability of a Women's Auxiliary.
5. "It moved that the Society acquire possession of the records of the Procurement and Assignment Service for physicians in Rhode Island.
6. "It approved of the transfer of the Charles F. Gormly Fund to the Society's general account, and authorized the Library Committee to utilize the money for the purchase of medical-legal texts to form a Dr. Charles F. Gormly collection.
7. "It approved of the expenditure by the Trustees up to $2,500 for needed improvements in the Library building.
8. "It recommended that the President communicate with the Governor of the State and offer the services of the Society in naming members of the Society to serve on committees created by legislative action.
9. "It approved of the continuance of the Council of the New England State Medical Societies, and appropriated $100.00 for the support of this Council's activities.

Dr. Buffum submitted the following recommendation from the Council to the House of Delegates:

> That the House of Delegates give its full support to the child health services study being conducted by the American Academy of Pediatrics in cooperation with the Child Health Committee of the Society, and that the Society appropriate the sum of $100.00 towards the financial support of the study.

Dr. Buffum moved the adoption of this recommendation. The motion was seconded and passed.

Dr. Buffum, secretary of the Society, submitted the recommendation of the Council of Dr. Arthur H. Ruggles as President-Elect of the Rhode Island Medical Society. Dr. Peter F. Harrington moved that the House elect Dr. Arthur H. Ruggles as President-Elect for 1946-1947 of the Rhode Island Medical Society. The motion was seconded and unanimously adopted.

Dr. Buffum moved the election of the entire list of nominees for officers and elected committees as presented by the Council. The motion was seconded and passed.

Dr. Ladd called for any resolutions by any district society or delegate.

Dr. Joseph L. Belliotti submitted the following resolution:

> WHEREAS the office of President of the Rhode Island Medical Society constitutes an honor that carries with it increasing duties and demands each year upon the time and energy of the encumbent, and
>
> WHEREAS the Society has been fortunate in having as its Presidents men who have devoted themselves unselfishly to the many tasks imposed by the office, and
>
> WHEREAS the Society has never adopted any method of expressing in some tangible way its esteem of its retiring President, be it
>
> RESOLVED that effective with this year of 1946 the Society present the retiring President each year with a gavel suitably inscribed, as a token of appreciation for his services as leader of the medical profession of this State during his term of office.

Dr. Adelson moved the adoption of this resolution. The motion was seconded and passed.

Dr. Peter F. Harrington submitted the following resolution:

> WHEREAS, there is an increasing tendency for government agencies to draft or establish minimum fee schedules for services provided the public through the administration of such agencies, and
>
> WHEREAS, the problem has been met in other communities by the adoption of a uniform fee schedule for governmental agencies,
>
> THEREFORE, BE IT RESOLVED, that the Rhode Island Medical Society undertake the adoption of a uniform fee schedule for wards and dependents of government by establishing a special committee of the House of Delegates to prepare and submit a proposed minimum uniform fee schedule at the scheduled meeting in September, 1946.

Dr. Mara moved the adoption of this resolution. The motion was seconded and passed.

Dr. Earl J. Mara submitted the following resolution:

> WHEREAS, there is a constant expansion of health activities by various agencies of the State of Rhode Island, and
>
> WHEREAS, this expansion results in the duplication in many ways of effort, and also tends to increase otherwise the cost of medical care to the individual citizen, and
>
> WHEREAS, this situation is exemplified by the administration of a state Curative Center for the rehabilitation of injured beneficiaries of the Workmen's Compensation Act under the State Labor Department; by the administration of an adult rehabilitation program

continued on page 467

HOUSE OF DELEGATES

concluded from page 465

under the State Department of Education; by the administration of a Cash Sickness Compensation Act, predicated on certification of illness, by the State Unemployment Compensation Board; by the administration of a medical care program for the public through the State Department of Social Welfare; and by public health activities in general by the State Department of Health, therefore,

BE IT RESOLVED that the Rhode Island Medical Society initiate a study whereby a Division of Medical Services, under the direction of the state director of health, may be established to administer a program of medical care in the state of Rhode Island for indigent and medically indigent persons, or either of such classes, and also to supervise and administer the medical phases, in cooperation with the respective state agency, of the Cash Sickness Compensation Act, the Vocational Rehabilitation Program, and the Curative Center.

Dr. Herman C. Pitts moved the adoption of this resolution. The motion was seconded and unanimously passed.

Dr. Mara moved that the President of the Society be empowered to appoint a Committee to study the proposal as recommended in the resolution relative to the initiation of a study regarding the establishment of a division of medical service under the direction of the State Department of Health. The motion was seconded and passed.

Dr. Herman C. Pitts submitted the following resolution with the recommendation that if adopted it be submitted to the House of Delegates of the American Medical Association at its annual meeting in July.

WHEREAS, the American Medical Association, through its House of Delegates has consistently favored insurance providing for compensation for the loss of earnings due to sickness, and

WHEREAS, compulsory cash sickness compensation programs are now in operation in Rhode Island and in California, and are being proposed in several of the other states, and

WHEREAS, such programs deeply concern the medical profession which must certify to the illnesses to permit beneficiaries to claim cash compensation, and

WHEREAS, experience in Rhode Island has shown that such certifications must be made by attending physicians if the health interests of the individual are to be fully protected, and

WHEREAS, the House of Delegates of the American Medical Association has expressed its opinion that the attending physician should be relieved of the duty of certification of illness and recovery, which function it believed should be performed by a qualified medical employee of the disbursing agency; be it

RESOLVED that the House of Delegates of the American Medical Association review and amend the action taken at its meeting in September, 1938, at Chicago, on the subject of insurance against the loss of wages during sickness; and be it further

RESOLVED that the American Medical Association through the proper Council or Bureau make a complete study of the existing and proposed compulsory temporary disability compensation programs, and that it report the findings of such a study, particularly as regards medical phases of the programs, to each of the constituent state medical societies before January, 1947.

Dr. Harold Calder moved the adoption of the resolution. The motion was seconded and passed.

Dr. Harrington addressed the House on the question of closer relationships between the Society and the State Department of Health. He cited the proposals for changes in the Health Laws, and he expressed the feeling that the State Director of Health is not always cognizant of the thinking of the House of Delegates of the Society on these matters. He suggested that the Director of Health be made a member of the House of Delegates in order that he might better understand the attitudes of the House on various health matters.

The discussion was concluded by a motion by Dr. Adelson that the House of Delegates invite the State Director of Health to attend all of its meetings. The motion was seconded and passed.

The Executive Secretary briefly discussed the situation as regards the proposed new Health Code which failed of enactment in the recent session of the Legislature, and he urged that the Society actively make known its opinions at public hearings before the Health Survey Laws Commission.

Dr. Pitts moved that the House of Delegates instruct its Committee on Public Laws to ask for a public hearing on the proposed new Health Code before the Survey Laws Commission in order to make known the attitude of the Rhode Island Medical Society on the legislation. The motion was seconded and passed.

Dr. Mara moved adjournment of the House at 10:35 p. m.

Respectfully submitted,

WILLIAM P. BUFFUM, M.D., *Secretary*

WELCOME HOME

The Rhode Island Medical Society reports the following Rhode Island physicians as honorably released from active duty, most of whom have resumed the private practice of medicine in this State as of June 1. Additional listings will be made each month and members are urged to report promptly upon their return to Rhode Island.

REGINALD ALLEN, M.D., 223 Thayer Street, Providence

J. MERRILL GIBSON, M.D., 185 Angell Street, Providence

WALTER HAYES, M.D., 1103 Cranston Street, Providence

LAURENCE A. MORI, M.D., 55 Pocasset Avenue, Providence

FREDERIC W. RIPLEY, JR., M.D., 167 Angell Street, Providence

MARK YESSIAN, M.D., 184 Elmwood Avenue, Providence

COMMITTEE ON POSTGRADUATE EDUCATION

Report to the House of Delegates of the Rhode Island Medical Society, May 8, 1946

PART I.

Activities of the Committee during the past year

1. *Aid to Returning Veterans*

Your Committee has cooperated with the office of the Executive Secretary in attempting to aid veterans to make such contacts with hospitals and other treating institutions as would help them in obtaining postgraduate training.

2. *Reports on "Medical Opinion in Rhode Island"*

The Committee has compiled three reports based on data gathered by Dr. Elihu S. Wing in connection with the preparation of his presidential address in 1945. The titles of these reports and dates of publication in the RHODE ISLAND MEDICAL JOURNAL are as follows:

Report 1—Diagnostic Centers, October 1945 (pg. 725)

Report 2—Group Practice, November 1945 (pg. 801)

Report 3—Local Certification of Specialists, December 1945 (pg. 927)

These reports have arouse some interest and have caused some comments.

3. *Listing of Rhode Island Specialists*

As directed by the House of Delegates the Committee has prepared a list of local specialists. This comprises Part II of this report.

4. *The Care of Veterans*

Following the publication of the plans of Major General Hawley for the medical care of veterans the committee proposed that General Hawley be invited to address the membership of the Society at the mid-winter meeting. Previous to the meeting the House of Delegates adopted the resolutions introduced by the Committee.

General Hawley spoke at the meeting and the resolutions were read to him and approved by him.

Following the meeting your Committee prepared a report on the care of veterans which constitutes Part III of this report.

PART II

Rhode Island Specialists

Foreword

A list has been compiled by the Committee on Postgraduate Education for the benefit of such agencies and individuals as may have a use for such a list. It consists of:

1. Those who have obtained certification by or membership in a nationally recognized board, college, or similar organization pertaining to a recognized specialty. This would include all those certified by the national specialty boards, fellows and associates in the American Colleges of Surgery and Internal Medicine and similar organizations of like national recognition and scope.
2. Those who have attained the rank of visiting physician or surgeon on the staff of any of the hospitals listed below. By this is meant the highest grade in any department or service next to chief of service. This would include pathologists, roentgenologists and anesthetists who had attained senior rank though not necessarily heads of their departments. Their certification would in each case be only in the specialty in which the doctor holds his hospital position and not in any other field, even one closely allied (e.g., a general surgeon would not also qualify as a gynecologist.)

It is emphasized that the Rhode Island Medical Society does not vouch for the competency of the physicians in various fields in which they are listed as specialists. The responsibility for listing them rests on the specialty boards that have certified them, the colleges and other organizations which have enrolled them, and the hospitals which have advanced them to the positions of senior visiting physician or surgeon. The present list is compiled from lists submitted by hospitals and specialty boards and beyond a doubt is incomplete, and the name of any physician who has been omitted and who has the qualifications specified will be added as soon as his name is called to the attention of the Committee. (Note: A number of recently returned veteran-physicians are in the process of completing their examinations for certification and their names shall be added to the list as soon as the Committee is notified of their acceptance.)

(In view of the fact that the House of Delegates voted that the publication of the list of specialists, which is incomplete, be confined for use in the office of the Society, and not be published or publicized

continued on page 471

COMMITTEE ON POSTGRADUATE EDUCATION

continued from page 468

until authority is given by the House of Delegates, it is deleted here from this presentation of the Committee's official report.—THE EDITORS)

PART III

The Care of Veterans

Foreword—General Hawley made it clear that the Veterans Administration is anxious to make any working arrangement with the Rhode Island Medical Society that is satisfactory to the members of the Society and that will accomplish his primary purpose which is to get for the veteran the best professional care available. He stated that he is quite willing to make the Society the responsible body to deal with the Veterans Administration and to contract with the Society, or with the surgical prepayment organization, as a body to handle the payment to physicians for services to veterans. He accepted the resolutions as passed by the House of Delegates with the modification regarding residents ("ward officers") that is noted below. On the basis of the statements made by General Hawley the following plans are suggested.

A. *Out Patient Service*

In the judgment of your Committee the Rhode Island Medical Society should negotiate a contract with the Veterans Administration to cover the out patient care of veterans and should set up a mechanism for handling payments to its members for this work. Your Committee believes that this can best be done by the office of the surgical prepayment plan when that organization is set up. As, however, the out patient care of veterans is already going on and the surgical prepayment plan is not yet established, your Committee believed that a contract may well be made which will involve the handling of the payments by the office of the Society until such time as the surgical prepayment plan is in operation. It is recognized, however, that the action requires careful study and planning and a recommendation for further investigation and action by a special committee will be presented later in this report.

B. *Veterans Hospital*

As expressed in the resolution adopted by the House of Delegates it is suggested that the Rhode Island Medical Society act in place of the "Dean's Committees" in the matter of nominating members of the active staff of the hospital as far as such staff members are to be drawn from the practicing physicians of the state.

The plan of the hospital staff, as explained by General Hawley, will include men in the following grades:

continued on page 473

COMMITTEE ON POSTGRADUATE EDUCATION
continued from page 471

1. CHIEFS OF SERVICE. There will, according to the present plans, be five chiefs of service—Physician-in-chief, Surgeon-in-chief, Chief of the Department of Neuropsychiatry, Chief of the Department of Roentgenology and Chief of the Department of Pathology. These men will be full-time members of the Veterans Administration and all must be diplomates of their respective specialty boards. Local physicians who are qualified for these positions may be nominated with a good chance of appointment.

2. SENIOR CONSULTANTS. A number of older clinicians will be appointed from the local profession to act as consultants to the various services. These men will be called in from time to time and will be paid on a fee basis. They must be diplomates of their respective specialty boards. They will give advice as consultants or take part in the teaching program as need arises.

3. CONSULTANTS. From among the younger local clinicians a sufficient number of visiting physicians and surgeons will be appointed to carry on the work of the services as it is done in civilian hospitals. These men must be diplomates of their respective specialty boards. The title "Consultant" is the one authorized by the law but in practice their work will be that of attending or visiting men. They will serve half-time, approximately four hours daily, during their terms of service.

It is recommended by your committee that the Veterans Administration be requested to appoint a sufficient number of these consultants so that their term of duty will be three months in each year. This will allow men already on the staffs of civilian hospitals to accept these appointments and still carry on their work in the civilian hospitals whose staffs will thus not be unduly depleted.

4. WARD OFFICERS. These are actually residents who will be appointed from qualified recent graduates of medical schools. As they will not be appointed from the membership of the Rhode Island Medical Society it will not be the function of the Society to nominate them and they will, it is supposed, be obtained as are interns and residents in civilian hospitals.

The program of training these residents, however, will fall directly on the shoulders of the consultants and senior consultants drawn from the local profession. It is intended that these residencies shall be approved by their boards and their training requirements will therefore be quite definite as outlined by the American Medical Association ("Essentials of Approved Residencies and Fellowships", J. A. M. A. August, 1939, Vol. 113, pp. 794-799).

As regards training in the basic sciences, your committee recommends that the Department of Medical Sciences, Brown University, be requested to arrange and supervise such training. General Hawley has expressed approval of such an arrangement.

5. METHOD OF NOMINATION OF PHYSICIANS. In general, in the mattaer of nominating physicians for the positions of Senior Consultant and Consultant it is recommended that the Rhode Island Medical Society present to the Veterans Administration the names of all of its members considered fully qualified for appointment in these grades together with a detailed statement of the qualifications of each individual physician. The Veterans Administration would then make its selections on the basis of the data submitted.

6. DIRECTOR OF EDUCATION. It is reasonable to suppose that some individual would be in charge of the training program of residents as well as the educational activities of the staff in general. Whether such a function would be carried on by a full time officer of the Veterans Administration, a Senior Consultant, or a member of the Department of Medical Sciences at Brown would be, of course, decided by the Veterans Administration.

C. *Committee on Veterans Affairs*

Up to the present, by direction of President Kenney, the consideration of the relations of the Rhode Island Medical Society to the Veterans Administration has been in the hands of your Committee on Postgraduate Education, which suggested the visit of Major General Hawley to Providence and has obtained the information embodied in this report. This Committee has been concerned with educational problems of veterans and others but believes that for the general planning of the medical care of veterans in out patient and hospital services a Committee on Veterans Affairs should be appointed to supervise this whole matter with the exception of the subject of the education and training of physicians in the Veterans Hospital organization in which matter this committee should retain an interest and act in an advisory capacity.

Your Committee, therefore, recommends that the President appoint a special committee on veterans affairs to carry on further studies and formulate plans for the cooperation of the Rhode Island Medical Society with the Veterans Administration in the care of veterans. Your committee further recommends that to such a committee on Veterans affairs be assigned the task of the study and preparation of a contract for the out patient care of veterans by members of the Rhode Island Medical Society.

Respectfully submitted,

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